THE YELLOW FEVER SITUATION.

In Ecuador yellow fever continues present at Guayaquil and at other points, among which are Duran, Naranjito, and Milagro. In Brazil, according to latest reports, cases are still occurring at Manaos. In this connection it is to be borne in mind that the reported cases of yellow fever in that part of South America north of the Amazon River give at best but a poor idea of the prevalence of the disease in the region. Yellow fever is and has been for some time endemic at Iquitos, a city of Peru on the Amazon River. It has also become endemic in many localities throughout South America north of the Amazon, and possibly also in localities south of the river. There are those who believe that the disease unrecognized is also endemic in certain localities in Central America and possibly even as far north as southern Mexico, and from time to time reports are seen in print to the effect that yellow fever still persists in endemic form in certain of the islands of the West Indies.

PLAGUE AND ITS RELATION TO MARITIME QUARANTINE.

The Surgeon General has been endeavoring to familiarize those concerned directly or indirectly with maritime commerce regarding the economical, as well as the public-health necessity of general cooperation in maintaining vessels free from rats and in a sanitary condition. Upon their arrival at United States ports the quarantine treatment of vessels so maintained could be reduced to the minimum.

The campaign of education has consisted of the issuance of a pamphlet to the owners and masters of vessels explaining the nature of the quarantinable diseases and methods for preventing ships from becoming infected with them and the making of representations to commercial bodies in this country for the purpose of enlisting not only their aid, but through them the aid of commercial bodies in foreign countries. Assurances have been received that the information sent to owners and masters of vessels has been productive of much good. Assurances have also been received from the Chamber of Commerce of New York which indicate that this influential body is ready to give its sincere cooperation in the matter. At a monthly meeting of the Chamber of Commerce of the State of New York, December 5, 1912, a report submitted by its committee on foreign commerce and the revenue laws was unanimously adopted, recommending that the conditions regarding quarantine and the possibility of the lessening of restrictions on vessels, as set forth by the Surgeon General, be brought to the attention of the chambers of commerce of the leading seaports of the world, and that such other measures be taken as may seem necessary to bring the facts to the attention of merchants and shipping men. The suggestions referred to as made by the Surgeon General were as follows:

1. The systematic catching of rats on the wharves and along the water front of ports, the bacteriological examination of the rodents found, and the making of a weekly report through the local health authorities for the use of the Bureau of the Public Health Service in determining the sanitary status of the port.

2. Structural arrangements of wharves and docks so as to afford the least possible facilities for rat infestation.

3. The crating or boxing of goods for export or import in such manner as to prevent rats gaining entrance to individual parcels.

4. Structural alterations in ocean-going vessels not only to decrease the chances of rat infestation, but to afford means of catching those rodents which may get aboard.

In this connection an editorial appearing in the London Lancet of November 23, 1912, bears especially upon the matter under discussion, and for those interested is here quoted:

SHIP RATS AND THE SPREAD OF PLAGUE.

It seems scarcely necessary at the present day to emphasize the view that the spread of plague from one continent of the world to another is mainly effected, apart, of course, from human infection, through pestiferous rats carried on shipboard to healthy ports, where foci of the disease may be set up among the local rats, from which in time and through the agency of the rat-flea the specific microbe is transmitted to man. The opinion formerly held that plague virus could be conveyed under ordinary conditions by articles of commerce for long distances on vessels at sea is losing ground, more especially since some experts have asserted that the bacillus pestis usually loses its virulence to a greater or less extent when separated from the animal body, and more particularly when exposed to drying by the action of the sun or wind.

It is obvious, then, that the chief precautions to be taken against the importation of plague must include destruction of rats on ships, as well as on shore, in each port sanitary district, and also the use of means for preventing, as far as is practicable, the landing of recently arrived ship rats. It has to be remembered that rats have various other ways of leaving the ship and reaching the shore than by making use of gangways or mooring ropes. For example, they only too often conceal themselves in bales or in crates of goods, especially when the articles are packed in hay or straw; and in this manner they may be taken on shore in a lighter or landed directly upon the quay. Rats, similarly, may find their way on board a ship leaving an infected port. For instance, at San Juan, Porto Rico, which has recently been suffering from a prevalence of plague in man and in the rat, some packages of goods about to be placed upon a ship were examined the other day and a large number of the rodents were found concealed in the packing material and ready to be shipped with the goods to ports in the United States. It is unfortunate that so little information is usually available respecting the occurrence of epizootics of plague in rats at foreign ports. The International Sanitary Convention of Paris, of which most of the civilized nations are now signatories, makes no provision for rendering obligatory the notification of such occurrences, the reason for this being probably that the delegates of the great powers were reluctant to impose restrictions upon trade or inconveniences upon shipping. In the absence of such a provision, which might have proved very useful, it becomes all the more essential that prescribed measures dealing with rats on ships should be strictly enforced on all vessels arriving "from foreign."

Every great maritime nation is extremely liable to the importation of plague by ship rats. Among other countries, Britain has not escaped, for in addition to outbreaks of rat plague in the London docks on several occasions, epizootics among rodents have occurred of late years at various British ports, including Hull, Glasgow, Cardiff, and Ipswich. At Liverpool, too, from time to time an infected rat has been found, landed presumably from a recently arrived vessel, but there has never been, so far as we can ascertain, any outbreak of the infection among the local rats. The precise sources of these plague epizootics in rats at our ports were not in all instances definitely traced, but there are grounds for attributing the origin of most of them to some eastern port, such as Bombay or Alexandria, though, on the other hand, the Ipswich outbreak was believed to have been traced to a South American source.

From various quarters, most of them unofficial, reports have reached us in recent years as to infection of dock rats in various European ports—among others Marseille, Calais, Oporto, and Odessa; few details, however, of these epizootics have been published by the port authorities concerned. The experience of Hamburg, Germany's greatest commercial port, is both interesting and instructive. Since the year 1900 plague-infected rats have been detected on board some 47 vessels on their arrival in the Elbe; in no fewer than 41 instances the ships had come from a South American port; and mostly from one or other of the grain ports, such as Rosario, in the Rio de La Plata, commonly known in this country as the River Plate. These vessels carried cargoes chiefly of cereals along with linseed and oil cake or other articles notorious for attracting rats. Bacteriological examination was made upon the bodies of about 8,000 dead rats picked up on these ships before or after they had been submitted to the process of "deratisation" by Nocht and Giemsa's method (of which carbon monoxide

is the active ingredient), with the result that nearly 350 of the rodents were shown to have suffered from plague. Many of the rats picked up were in an advanced state of decomposition and definite results in the circumstances could not be expected from the bacteriological investigation; but it is believed that a number of these also had died from plague. So far as is known there has at no time been any extension of the plague infection from the ship rats to those on shore nor to the resident population of Hamburg—a result which speaks well for the careful and efficient way in which the anti-rat regulations are carried out by the port officials.

Hamburg's greatest source of danger, as indicated above, is from the ports in the River Plate, but from these, it is worthy of mention, no reliable information is made public as to the local incidence of plague in man or in the rat. Evidence from private sources, however, convinces us that outbreaks of human plague have been fairly frequent in these ports of late years, as well as epizootics in rats. The policy of concealment, which is unfortunately so general in South America, is apparently adopted in the River Plate ports with a view to protect local trade interests, no consideration being shown to those of the European ports with which they carry on their commerce. In the circumstances German and English ports, for their own protection from plague, have to rely largely upon the excellence of their own regulations and upon the efficiency and alertness of their own sanitary staffs.

THE PREVALENCE AND GEOGRAPHIC DISTRIBUTION OF PELLAGRA IN THE UNITED STATES.

By C. H. LAVINDER, Surgeon, United States Public Health Service.

Ever since the recognition of pellagra as a disease endemic and prevalent in the United States various attempts have been made to determine with some degree of exactitude its prevalence and geographic distribution, but up to the present time this very important information is still wanting, and we have been compelled to depend upon estimates which have not always been based upon any very accurate data. Under the direction of the Surgeon General of the Public Health Service I began some time ago a systematic attempt to collect statistical information relative to this disease in the United States. This work has proceeded slowly and suffered many interruptions, and my record is as yet by no means complete. I believe, however, that with the data I now have and the information compiled by others we are in a position when for the first time we may say with some degree of assurance approximately how much pellagra we have had in the United States and where it is prevailing. My report, as stated, is incomplete and must be taken as preliminary to a fuller report, which it is my hope may be made at no very distant date, when the work of collecting data is completed and the results compiled.

The pellagrous area of the United States lies, to a large extent, outside of the "registration area" for deaths as defined by the Census Bureau, and the statistics on this disease furnished by the Census Bureau are really almost a negligible quantity. In compiling data, therefore, we are compelled to depend upon reports made by individuals, and upon personal appeals, by card or letter, to State health officials, superintendents of asylums for the insane, heads of public institutions, and individual practitioners. It is needless to say that this method is faulty, and the resulting information by no means as accurate or complete as one would wish. The appeal to State health officials is of little value, since the disease is reportable in but very few States, and in only one of them by law. There are very few statistical reports in existence, and such as do exist have also been compiled with these same faulty methods. Personal appeals by card or letter to individual practitioners and to public institu-